

Chesterfield County School District
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District Technology Plan

July 1, 2009 – June 30, 2013



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3/31/2010
Date

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District Profile

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| Number of schools in the district | 17 |
| Number of students enrolled in the district | 7,738 |
| Number of students eligible for free and reduced lunches | 5,148 |
| Number of English as a Second Language (ESL) students | 189 |
| Number of dropouts | 18 |
| Graduation rate | 79.9% |
| District E-Rate discount | 80% |

Executive Summary

In 1983 Chesterfield County placed computers in three schools to address largely administrative tasks. By 1988 nearly 200 computers were in use in all fifteen district schools for both instructional and administrative purposes. In 1991 local area networks were completed at all district sites and a functional wide area network was in use in 1998.

In subsequent years LAN and WAN infrastructure has been significantly enhanced and today more than 2700 computers are in daily use by virtually all students, teachers, administrators and support staff.

In 1991 the district began an ambitious staff development program. Teachers enrolled in a graduate course developed by the district in which they built a multimedia computer from component parts, learned basic operating concepts and were provided software and skills and then relocated the computer to their classroom to utilize this equipment in daily instructional applications. The technology department has since developed over forty classes and workshops to provide additional and focused training for all staff in the effective and efficient use of this technology.

Throughout this effort of over two decades, the district has drawn upon the resources and support of the community in furthering the integration and impact of technology upon the teaching and learning process. The following plan builds upon this tradition of growth, innovation and creativity in securing adequate technology, training and support to ensure that technology remains a viable component in the district's effort to enhance student achievement and manage the educational process.

The plan addresses five core technology dimensions with the primary goal for each dimension as follows:

Technology Dimension 1: Learners and Their Environment

Goal: Embed digital information systems into research-proven instructional strategies so that our students achieve technological literacy, attain 21st century skills, and meet the state's academic standards

Technology Dimension 2: Professional Capacity

Goal: Provide curriculum development and professional development/training to increase the technical competency of all South Carolina educators so that research-proven strategies and the effective integration of instructional technology systems can continue to increase student achievement. This includes assistive technology.

Technology Dimension 3: Instructional Capacity

Goal: Use current and emerging technologies to create learner-centered instructional environments that enhance academic achievement.

Technology Dimension 4: Community Connections

Goal: Use technology, including assistive technology, and digital information systems to maximize community involvement and community partnerships and so increase student achievement.

Technology Dimension 5: Support Capacity

Goal: Expand and support technology resources to assist educators and learners in attaining 21st century skills and meeting the state academic standards.

Each of these goals is followed by recommended implementation strategies and considerations that reflect aspects of the particular core dimension. Provided at the end of the five dimensions sections in the document is a cumulative list of benchmarks that are designed to enable the district to validate progress.

Current Needs Assessment

District Needs Assessment

The district has determined eight specific areas of need in addressing the implementation of this plan:

- 1) Expansion of the "technology infused classroom" model
- 2) Upgrade of WAN 10MB circuits to 100MB and upgrade of 20MB Internet circuit to 30MB.
- 3) Implementation of an "equipment replacement/refresh" schedule throughout the district – replace workstations, servers, switches and routers every 4 years.
- 4) Continuation and expansion of the "technology coach" program providing support to all classroom teachers – minimum of two coaches district-wide.
- 5) Continued expansion of the staff development offerings and training efforts developed by the technology department to meet specific district needs – both graduate course and workshops to be offered on-site and without cost.
- 6) Secure sources of adequate and sustained funding – E-Rate, grant and general fund.

- 7) Employ adequate technology staff to manage continued program growth – additional technical and clerical staff for user support.
- 8) Continue community outreach and education to maintain support – greater parental involvement.

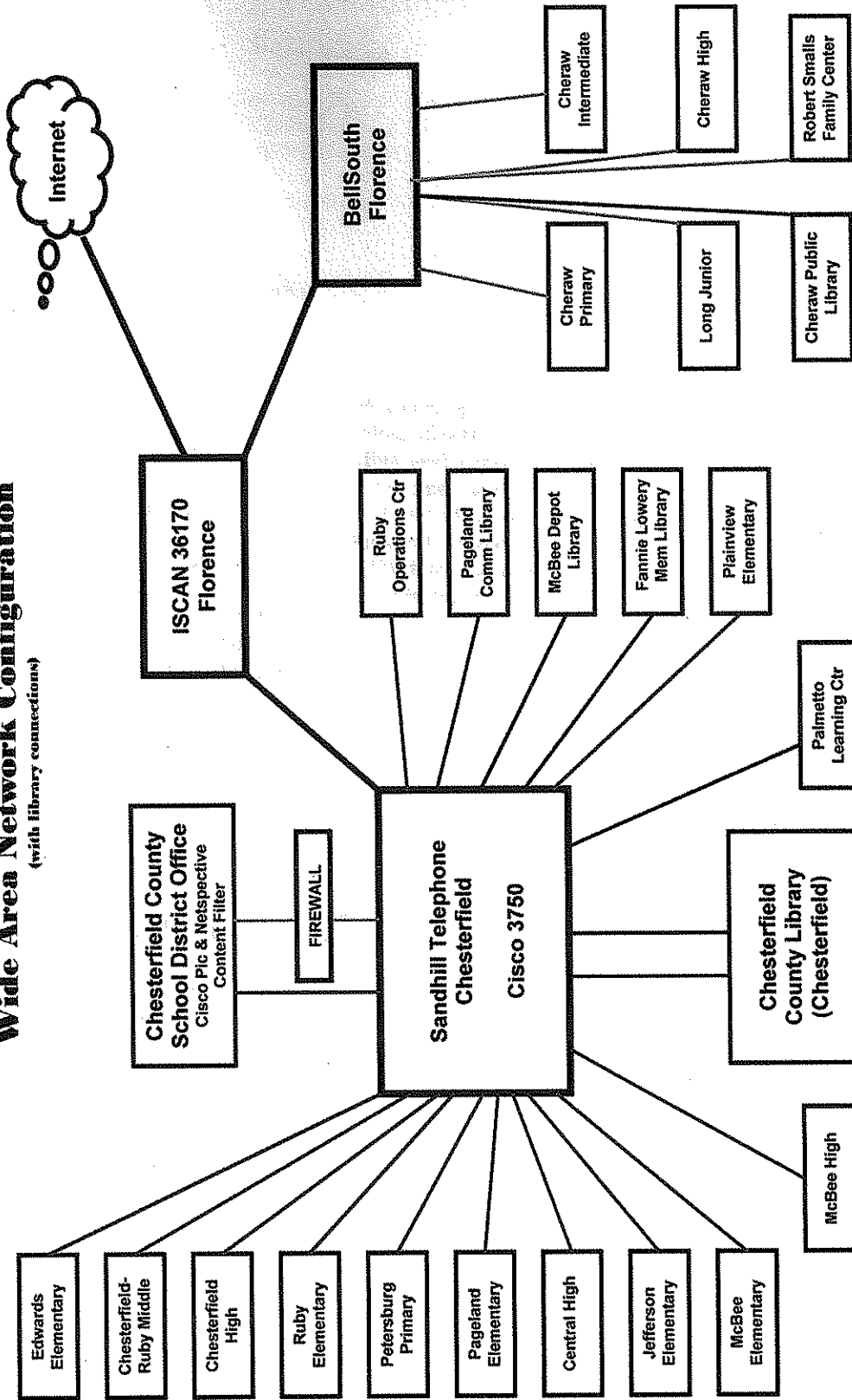
Current Inventory

- ◆ 10/100MB WAN connecting 21 district LANs and 20MB outlet to the Internet
- ◆ 36 servers, 2700 network nodes and more than 1000 users
- ◆ more than 2200 multimedia desktop computers and 800 printers
- ◆ more than 500 laptop computers
- ◆ more than 225 LCD projectors
- ◆ more than 200 interactive whiteboards
- ◆ software in use on network: SuccessMaker, Intensive Phonics, Reading Horizons, NovaNet, RiverDeep, Scholastic Reading Inventory, SkillsBank Learning System, Thinking Maps, Project RIDE, 1-on-1 SAT, Automated Accounting, Active Prep Assessment, CheckPro, ExamPro, KeyTrain, Learning Styles Inventory, MicroPace Pro, MicroType Pro, Thomson Course Technology, Scholastic Keys, A+ Learning Systems, Finale, Orchard Learning Systems, SAT Coach, KCA Keyboarding, PLATO Learning Systems, Renaissance Place, SCOIS, Fitness Gram, Excent, MAP Testing, SNAP, GIFT, ACTWARE 1000, JAWS, File System Factory, AB Tutor, GroupWise Email, FrontPage 2003, Word 2003, Excel 2003, Access 2003, PowerPoint 2003, Publisher 2000, NCS Mentor, IE 6.0, Foxfire, Novell Client, iPrint, Symantec AntiVirus, Printshop 15, Spectrum, Novell Netware 6.5, ZenWorks, DeepFreeze, EPES Accounting, IDMaker – ID Printshop, GWAVA Filtering, SUNS, PowerSchool, Destiny Circulation and Destiny Textbook.

Current Technology Support Strategies

- ◆ Centralized help desk
- ◆ One district technicians
- ◆ Two network engineer
- ◆ Trained staff in schools supporting specific applications and offering staff development
- ◆ Two technology coaches serving 17 schools
- ◆ District planning and implementation team

Chesterfield County School District Wide Area Network Configuration (with library connections)



Blue Link is 10MB District Circuit
 Green Link is 100MB District Circuit
 Red Link is 1GB District Circuit
 Orange Link is 3MB District Circuit

District Philosophy

We believe:

- **All students are capable of learning if a variety of instructional approaches are used to support their learning efforts**
- **Parents should take an active and supportive role in their child's education**
- **Students are unique and have special talents**
- **Cultural diversity is an asset and should be celebrated with respect and dignity**
- **Everyone has a right to learn in a safe environment and a positive climate**
- **Successful schools have effective communication**
- **Students should be responsible for their own actions and share in the responsibility for their own learning**
- **Current technology should be accessible to all students**
- **Character development should be integrated throughout the curriculum**
- **Members of the community should share in the responsibility of learning**
- **Faculty and staff should have high expectations for all students**

District Mission Statement

The mission of Chesterfield County School District is to prepare all students to be productive citizens in a changing society by continuously improving and implementing educational processes with ongoing community support.

Dimension 1: Learners and Their Environment

Goal: Chesterfield County School District will *embed digital information systems into research-proven instructional strategies so that our students achieve technological literacy, attain 21st century skills, and meet the state's academic standards.*

Snapshot of Current Technology Use:

The district is in the process of identifying key components of a "technology infused classroom" and installing these technology enhancements in each instructional classroom. Over 200 classrooms have already been equipped with ceiling mounted projectors, interactive whiteboards, most with document cameras, sound amplification and ETV signal conversion for projection. Additionally, all students and staff presently have available:

- Internet access in all classrooms
- Computer labs at each school
- Technology managed media centers
- WAN connecting all schools with 10MB or 100MB circuits
- Network based software supporting instructional delivery: SuccessMaker, Renaissance Place, SAT Prep, NovaNet, Odyssey Compass Learning,
- Network based software supporting management of instruction: PowerSchool, Destiny Circulation and Textbook, MAPS, FitnessGram, TestView, Excent

| Objectives | Strategies |
|--|---|
| 1.1 Students will engage in authentic learning activities that are aligned with state standards and that integrate technology, including assistive technology, into the core content. | <ul style="list-style-type: none">A. Develop technology-enhanced learning activities aligned with state standards in the content areasB. Create and maintain student technology portfolios documenting grade-level-appropriate technology competencies |
| 1.2 The school district and the schools will provide students with an enhanced learning environment through technological tools, including assistive technology, that are designed to promote high academic achievement. | <ul style="list-style-type: none">A. Establish school and community learning environments that enable students to use technology for real-world problem solving and researchB. Adopt grade-level-appropriate technology standards and integrate them into the curriculum to prepare students to function in an information-rich global societyC. Adopt grade-level-appropriate technology standards and integrate them into the curriculum to enable students to fully participate in today's information-rich global society |

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| <p>1.3 Students will select the appropriate tools to complete authentic, real-life multidisciplinary tasks and will demonstrate technology competence by the end of the eighth grade.</p> | <p>A. Create and use lesson activities in which students employ a variety of technology tools, including assistive technology, to complete authentic multidisciplinary tasks</p> <p>B. Provide all students, including those with special needs, access to a range of high and low technology solutions, including software, peripherals, and other tools to increase student communication, participation, and collaboration</p> <p>C. Measure student technology proficiency by using surveys and performance-based assessments</p> |
| <p>1.4 Students will use digital information systems to acquire and demonstrate communication, collaboration, and engagement skills that are aligned with state standards across the curriculum and will thereby increase their level of academic achievement.</p> | <p>A. Recognize and promote best practices that successfully integrate technology, including assistive technology, into the curriculum</p> <p>B. Conduct student projects that will yield sustained, engaged learning and collaboration in the core content areas</p> <p>C. Provide appropriate accommodations for students with special needs when needed, including standardized tests, using technology</p> <p>D. Provide opportunities and resources to districts and schools to facilitate the development and implementation of effective communication and collaboration skills using technology in the core content areas</p> <p>E. Have students present their collaborative projects to identified audiences</p> |

Action List:

- ❖ The district will employ current, research-based findings to equip classrooms with appropriate technology to support the instructional program.
- ❖ CCSD will provide access to effective, research-based assistive technologies including software, peripherals and other tools to increase student communication, collaboration and engagement that will support inclusion of students with disabilities in the core content areas at all grade levels.
- ❖ The district will establish grade level appropriate technology standards and competencies for all students based on ISTE NETS-S and will further establish minimum requirements for student portfolios that document student progress in achieving these standards.
- ❖ The district will develop strategies to ensure that school improvement plans address the use of technology, including assistive technology, to support a shared learning environment.
- ❖ The district will complete initial and on-going assessments to measure the increased availability of technology opportunities and resources.
- ❖ The district will complete initial and follow-up assessments to ensure that the use of technology, including assistive technology, is effective in enhancing student learning.
- ❖ The district will identify "best practices" related to technology integration used both within and outside the district and disseminate these practices via on-line resources.

- ❖ Both the district and schools will develop methods of recognizing student technology achievement, including the use of assistive technology.

Implementation Action Steps:

The district will:

- Assign school technology coaches to offer guidance and support to schools.
- Provide support and guidance for teachers to ensure that lesson plans and activities incorporate a variety of technologies in ways that make them accessible to individuals with special needs.
- Offer professional development courses and activities using innovative delivery strategies.
- Offer support to classroom teachers in the development of lesson plans that incorporate a variety of technologies into authentic multidisciplinary tasks.
- Recognize and publicize exemplary uses of technology by teachers and students.
- Encourage home and community involvement in the public school system by enhanced use of electronic communications and other media.

The schools will:

- Implement an on-line system for displaying exemplary student work and recognizing significant student achievements.
- Provide access to technology resources, including assistive technology, during non-traditional school hours.
- Include goals and strategies for technology, including assistive technology, development in school improvement plans.
- Encourage home and community involvement in the public school system through the use of electronic communications and other media.

Funding Considerations:

District:

- Technology professional development
- Technology course development
- Technology staff
- Recognition programs

- Teacher and student portfolio materials
- Technology resources to support standards-based learning across the curriculum.

Schools:

- Technology professional development
- Technology course development
- Technology staff
- Recognition programs
- Teacher and student portfolio materials
- Technology resources to support standards-based learning across the curriculum.

Evaluation of Objectives

The district will employ a variety of evaluation measures as outlined below to determine the scope and effectiveness of its efforts in addressing this goal and its objectives

| Objectives | Possible Baseline Data | Possible Data Sources |
|------------|--|--|
| 1.1 | Statewide achievement test scores | Statewide achievement test scores |
| | District Report Cards | District Report Cards |
| 1.2 | Technology surveys | Technology surveys |
| | School Technology & Improvement Plans | Observations and interviews |
| 1.3 | District, School and Community surveys | Anecdotal records |
| | | Documented access to on-line resources |
| 1.4 | Student competency surveys | Listing of recognition programs |

Dimension 2: Professional Capacity

Goal: Chesterfield County School District will provide curriculum development and professional development/training to increase the technical competency of all South Carolina educators so that research-proven strategies and the effective integration of instructional technology systems can continue to increase student achievement. This includes assistive technology.

Snapshot of Current Technology Use:

The district presently utilizes a variety of curriculum and professional development strategies such as graduate courses taught at neighboring colleges and universities as well as on-site offerings including Intel-Teach To The Future. Each year multiple technology workshops are prepared and offered by the district's Technology Department in each of the schools and addressing specific and focused topics of interest. On-line technology courses are coordinated through the district's Staff Development office and a local on-line course has been developed and is being offered to enhance email skills. Schools also offer informal and on-going activities utilizing district technology staff or vendors in enhancing staff technology competencies. Technology coaches supported through an E2T2 grant presently support a wide range of training activities in the schools. One hundred percent of teachers and administrators seeking certificate renewal successfully met the requirements for "basic teacher technology proficiency." Over 90% of those yet to be certified under the Teacher Technology Proficiency Proviso have met all the requirements.

| Objectives | Strategies |
|---|---|
| 2.1 The school district will collaborate in planning for professional development, ensuring that teachers and district staff are trained to embed technology into instruction and learning, including assistive technology. | <ul style="list-style-type: none">A. Develop and submit a technology plan that (1) is directed by the district's technology leadership, (2) is designed for each school in the district as applicable, and (3) calls for site-based input from technology committees or teams in each buildingB. Include in the district technology plan the training needed for school and district staff to evaluate software in order to make decisions that ensure the promotion of higher-order thinking skills for all students, including those with special needs.C. Include in the district technology plan the training needed to ensure the accessibility of electronic and information technology to students with special needs |
| 2.2 The school district will provide schools with information and training in technology integration so that teachers can use research-based best-practice instructional methods throughout the curriculum. | <ul style="list-style-type: none">A. Continue to offer professional development activities and training in a variety of ways (i.e., on-site, off-site, on-line, self-paced, and combinations of these methods) to address the technology needs of staff, paying special attention to high-need schools and schools serving economically disadvantaged populations, including students with special needsB. Increase the availability of technology professional development tools to teachers: access to laptop computers and presentation devices, Internet access at the classroom level, interactive on-line access to state curriculum standards and lesson plans, access to Web-based training opportunities, and access to state-of-the art training centers |

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| | <p>C. in their particular geographic areas Provide professional development opportunities focused on aligning state technology standards with state academic content standards</p> <p>D. Develop an extensive statewide network of professional development providers who have the skills and experience necessary to prepare teachers for effective technology, use professional development providers who have the skills and experience necessary to prepare teachers for effective technology use</p> <p>E. Develop alliances with subject, grade, or position-specific professional organizations to promote technology integration throughout the K–12 curriculum</p> |
| <p>2.3 The school district will provide the schools with full-time multidimensional technology leadership whose focus is to ensure that technology is making a significant instructional and administrative impact for students, teachers, and administrators.</p> | <p>A. Require that technology coaches provide direct training and consultation to teachers in their classrooms, with special emphasis on helping administrators, teachers, and students meet the state-recommended technology standards (ISTE NETS-A, ISTE NETS-T, ISTE NETS-S) as well as helping students to meet the state's content standards in all areas.</p> <p>B. Continue to support full-time technology coaches to assist with basic technology skills and the integration of the technology into classroom instruction.</p> |
| <p>2.4 The school district will assess the overall effectiveness of professional development in the area of instructional technology standards and the impact of technology on student achievement.</p> | <p>A. Require minimum levels of teacher technology proficiency for replication and adaptation across the district</p> <p>B. Continue to incorporate instructional technology assessment into current teacher and administrator evaluation processes</p> <p>C. Encourage teachers to create and maintain technology portfolios showing examples of their students' work and documenting the integration of technology in their classrooms</p> <p>D. Administer evaluations to determine the effectiveness and impact of the professional development offered to teachers and administrators</p> |
| <p>2.5 The school district will enable educators to achieve and demonstrate proficiency in integrating state-recommended instructional technology standards (ISTE NETS-A, ISTE NETS-S, and ISTE NETS-T) into their specific area of professional practice to increase student achievement.</p> | <p>A. Include in the district technology plan a professional development program that enables teachers to progress from their current levels of ability in using and integrating technology, including appropriate assistive technology, to full proficiency.</p> <p>B. Update a district professional development program to aid the district in satisfying the requirements of the teacher technology proficiency proviso.</p> <p>C. Implement a district process that requires demonstration of proficiency in integrating instructional technology standards into instruction.</p> <p>D. Urge the General Assembly to amend the teacher technology proviso to require district and school administrators to demonstrate technology proficiencies based upon the state-recommended national standards for administrators (ISTE NETS-A) and ISTE standards for technology leaders.</p> |

Action List:

- ❖ CCSD will employ or appoint full-time leadership for the use of technology, to include assistive technology, in order to increase student achievement.
- ❖ The district will utilize the expertise of staff members and faculty in the schools.
- ❖ A school technology coach should be employed or appointed at each school to assist teachers and students with the mastery of technology competencies.
- ❖ An assistive technology assessment team should be appointed by the district to ensure that the teachers of special needs students can make effective use of available technologies.
- ❖ The district will develop and submit annually to the SDE a technology plan update that documents site-based input and includes a plan for professional development that outlines the technology education offerings and requirements, including assistive technology.
- ❖ District and school administrators should submit to their supervisors an annual professional development plan that includes technology goals aligned with state ISTE NETS-A and that is reviewed as part of the administrator's annual evaluation.
- ❖ The district will provide training to district and building-level administrators so that they can effectively assess a teacher's ability to integrate technology, including assistive technology, into the curriculum.
- ❖ The district will provide training for assistive technology teams in assistive technology assessment, options and curriculum integration.
- ❖ CCSD will provide training for teachers in using assistive technology tools.
- ❖ The district will provide training in the evaluation of software in order to make decisions that ensure the promotion of higher-order thinking skills for all students, including those with special needs.
- ❖ CCSD will provide training in accessibility issues involving applicable state and federal legislation.
- ❖ District reports and evaluations of professional development initiatives and reports on the use of technology grant funds should demonstrate an increase in access to professional development.
- ❖ The district will adopt assessment instruments and will develop a model or template for teacher portfolio content.
- ❖ The district will encourage teachers maintain portfolios that include sample lesson plans demonstrating technology integration across core content areas in alignment with state academic standards.

- ❖ The district, in cooperation with the SDE, will develop and implement an on-line assessment instrument to determine a teacher's level of technology proficiency.

Implementation Action Steps:

The district will:

- Submit a technology plan, including a professional development plan, to the SDE Office of Technology for approval.
- Administer a district technology professional development assessment to administrators and teachers to evaluate current training need areas and to create the district technology professional development plan based upon these current needs.
- Offer ongoing, sustained professional development activities.
- Submit teacher technology proficiency assurance forms to the Office of Technology as required in compliance with the Teacher Technology Proficiency Proviso.
- Initiate partnerships with community entities to create greater access to technology, including assistive technology, and a community learning environment.
- Administer needs assessments to identify areas of weakness and follow up with assessments that measure the impact of professional development in technology.
- Evaluate and adjust technology professional development plans as indicated by needs assessments.

The schools will:

- Submit a technology plan, including a professional development plan, to the local district office.
- Employ a school technology integration specialist who is knowledgeable about assistive technologies, and will submit training needs and reports to the district.
- Begin maintenance and review of teacher technology portfolios.
- Administer needs assessments to identify areas of weakness and follow up with assessments that measure the impact of professional development in technology.
- Monitor and adjust professional development in technology as indicated by needs assessments.

Funding Considerations:

District:

- Development of professional development plans
- Committee development of district and school technology plans
- Professional development needs assessment tools
- Evaluation tools to measure the impact and effectiveness of technology professional development
- High-quality, sustained professional development programs offered via innovative delivery methods
- Evaluation experts to demonstrate the impact of programs and initiatives
- Review of scientifically based research

Schools:

- Committee development of district and school technology plans
- School technology coach salary
- Professional development needs assessment tools
- Evaluation tools to measure the impact and effectiveness of technology professional development
- High-quality, sustained professional development programs offered via innovative delivery methods
- Evaluation experts to demonstrate the impact of programs and initiatives
- Review of scientifically based research

Evaluation of Objectives

The district will employ a variety of evaluation measures as outlined below to determine the scope and effectiveness of its efforts in addressing this goal and its objectives

| Objectives | Possible Baseline Data | Possible Data Sources |
|------------|---|---|
| 2.1 | Statewide achievement test scores | Statewide achievement test scores |
| 2.2 | District Report Cards | District Report Cards |
| 2.3 | Teacher Technology Proviso forms | Professional Development tracking and surveys |
| 2.4 | Professional Development surveys | Observations and interviews |
| 2.5 | School Technology and Improvement plans | Anecdotal records |
| | SCTLC on-line resources | Documented access to on-line resources |
| | Technology assessments | Workshop/In-service participation records |
| | | Technology assessments |

Dimension 3: Instructional Capacity

Goal: Chesterfield County School District will use current and emerging technologies to create learner-centered instructional environments that enhance academic achievement.

Snapshot of Current Technology Use:

The district presently supports a robust, switched wide area network and twenty-one local area networks connected via 10MB and 100MB circuits featuring:

- Internet access in all classrooms with filtering, anti-virus protection and hard drive protection (DeepFreeze)
- Fifty-two computer labs distributed among the district's sixteen schools
- Two hundred classrooms presently equipped with ceiling mounted projectors, interactive whiteboards, most with document cameras, enhanced audio systems and laptops.
- A variety of computer peripherals available for use at each school including digital cameras, digital scanners, scan converters, etc.
- Access to a wide variety of server-based instructional resources and administrative tools
- A web server hosting one district and 17 school web sites
- Email accounts for all teachers, administrators and a significant number of non-certified employees and students.

| Objectives | Strategies |
|--|--|
| 3.1 The school district and the schools will provide teachers with the technology resources, including assistive technology, necessary to increase academic achievement by engaging students in active learning. | A. Provide teachers with access to knowledgeable personnel, productivity tools, on-line services, media-based instructional materials, and primary sources of data in settings that enrich and extend teaching goals |
| 3.2 The school district will provide and support a variety of multimedia equipment and software for teaching and learning.. | A. Establish a system for identifying, specifying, prioritizing, and managing equipment for multimedia development in direct support of curricular and professional development objectives using ISTE Technology Support Index as a guide. B. Communicate via the district technology plan a vision for multimedia infrastructure designed to support instruction |
| 3.3 The school district and the schools will provide students with access to current and emerging technology resources that will extend their learning beyond the traditional classroom setting and schedule. | A. Provide students with access to technology, on-line services, and media-based instructional materials, allowing them to select appropriate tools that will enrich and extend their learning |

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|---|---|
| <p>3.4 The district will develop a technology framework for local assessment and planning that addresses the steps necessary to create a technology-rich environment which fosters increased achievement by all students, including those with special needs.</p> | <p>A. Facilitate the use of technologies to support and enhance instructional methods (including the use of hardware, software, and assistive technology) that develop higher-level thinking, decision-making, and problem-solving skills</p> <p>B. Ensure that curricular design, instructional strategies, and learning environments integrate appropriate technologies (including the range of assistive technology options) to significantly impact teaching and learning</p> |
|---|---|

Action List:

- ❖ The district will conduct technology planning meetings to address curricular design, the instructional needs of all teachers, instructional strategies and appropriate learning environments.
- ❖ CCSD will conduct technology planning meetings to address the inclusion of appropriate assistive technology into curricular design, instructional strategies and the learning environments of both the general student population and special needs students.
- ❖ The district will pursue funding opportunities such as grants to provide funds to acquire and maintain hardware and software for use in classroom instruction.
- ❖ CCSD will pursue funding opportunities such as grants to acquire and maintain assistive technology for use in classroom instruction and home access where appropriate.
- ❖ Student portfolios resulting from the integration of technology into core curriculum areas will be maintained to document mastery of student competencies that illustrate the ability to synthesize and analyze information.

Implementation Action Steps:

The district will:

- Conduct technology curriculum planning meetings.
- Include an instructional technology plan and an assistive technology plan I the technology plan to be submitted for approval to the SDE Office of Technology.
- Create methods of gauging technology readiness.
- Create a committee to oversee the evaluation of software and hardware for desirable student outcomes and standardization of selection/implementation where appropriate based upon scientific research real-world applications.
- Designate technology leaders.
- Participate in ongoing, sustained professional development activities and maintain a log for each course, workshop, inservice or event for portfolio inclusion.

- Submit teacher technology proficiency assurance forms to the SDE Office of Technology in accordance with Teacher Technology Proficiency Proviso requirements.
- Initiate partnerships with community entities to create greater access to technology and a community learning environment.
- Pursue funding opportunities such as grants to acquire and maintain hardware, instructional software and assistive technology.
- Pursue the delivery of courses for students and professional development courses for teachers via innovative methods.

The schools will:

- Conduct technology curriculum planning meetings.
- Submit a technology plan, including a professional development plan to the district.
- Employ a school technology coach who is knowledgeable about assistive technologies and will submit training and needs reports.
- Ensure that teachers and administrators begin maintaining technology portfolios.
- Evaluate periodically teacher and administrator portfolios to measure the impact of technology integration, including assistive technology, on student achievement.
- Interview students to assess information literacy and the integration of technology into the learning environment.

Funding Considerations:

District:

- Committee development of district and school technology plans
- Evaluation tools to measure the impact and effectiveness of technology professional development
- Evaluation experts to demonstrate the impact of programs and initiatives
- Review of scientifically based research
- Distance learning and on-line learning applications
- Eighth grade student proficiency assessment and remediation
- School technology coach implementation
- Professional development

Schools:

- Committee development of district and school technology plans
- School technology coach implementation
- Professional development needs assessment tools
- Evaluation tools to measure the impact and effectiveness of technology professional development
- Evaluation experts to demonstrate the impact of programs and initiatives
- Review of scientifically based research
- Professional development

Evaluation of Objectives

The district will employ a variety of evaluation measures as outlined below to determine the scope and effectiveness of its efforts in addressing this goal and its objectives

| Objectives | Possible Baseline Data | Possible Data Sources |
|------------|--|--|
| 3.1 | Statewide achievement test scores | Statewide achievement test scores |
| 3.2 | District Report Cards | District Report Cards |
| 3.3 | Technology readiness and access surveys | Technology readiness and access surveys |
| 3.4 | Teacher Technology Proficiency Proviso forms | Observations and interviews |
| | School Technology and Improvement plans | Teacher Technology Proficiency Proviso forms |
| | Documentation of innovative professional development offerings | Anecdotal records |
| | Technology assessments | Documented access to on-line resources |
| | | Workshop/In-service participation records |
| | | Technology assessments |

Dimension 4: Community Connections

Goal: Chesterfield County School District use technology, including assistive technology, and digital information systems to maximize community involvement and community partnerships and so increase student achievement.

Snapshot of Current Technology Use:

The district presently seeks community involvement through:

- Providing access through district and school web portals, automated phone messaging, homework hot lines, and automated email contacts.
- Extended media center hours, evening activities, Saturday Academies and on-line resources based on the district's server all provide parent, student and public access beyond the normal school day.
- Each school in the district maintains a school-business partnership with three or more local businesses to share ideas and seek support for mutual academic interests.
- The district maintains a close and mutually beneficial relationship with the technology staff of the local technical college as well as numerous state agencies providing support for technology issues.
- On several occasions the district has developed consortium agreements with surrounding districts in applying for and administering grant funds.
- The Robert Smalls Family Center is a district owned and staffed facility that reaches out into the community to provide educational opportunities for adults and the parents of current public school students.
- The district's Adult Education program provides many opportunities for technology collaboration in the development and delivery of technology-rich instruction.
- The district has a good working relationship with the five private schools located in the area and works with them in providing technology training to teachers.
- The district works with Northeastern Technical School in providing dual credit classes for students, professional development opportunities for teachers and collaboration on grants and projects.
- The district has recently collaborated with schools in Nova Scotia Canada and Chile to provide live web cam sessions where students share cultural information with their international peers.
- Several schools have approached local businesses and industries with proposals for monetary support of technology initiatives and have been successful in gaining support.

| Objectives | Strategies |
|--|---|
| <p>4.1 The school district will ensure that all their buildings remain linked by the Internet to the State Library's DISCUS databases and to the Web sites of universities, museums, and other institutions to facilitate virtual communication between home, school, and community.</p> | <p>A. Host an electronic list through the district Web portal for schools and community entities interested in collaborative initiatives</p> |
| <p>4.2 The district will establish community technology partnerships and collaborations by providing tools, resources, and training that support student transition, achievement, and outcomes. (The term community includes parents, businesses, state and local agencies, nonprofit groups, and institutions of higher education.)</p> | <p>A. Write community-collaborative technology grants to develop and fund the use of technology to improve teaching and learning</p> <p>B. Form district-community partnerships to provide students with real-world experiences in the use of technology, including assistive technology, that enhance academic achievement</p> <p>C. Form district-community partnerships to facilitate the use of technology, including assistive technology, in the public schools and to improve outcomes for students transitioning from school to work or higher education</p> <p>D. Form district-community partnerships to help research and evaluate school and district technology projects</p> <p>E. Provide recognition/reward programs and/or incentives for partnerships showing impact</p> |
| <p>4.3 The district and schools will fully utilize all available resources by fostering collaboration and cooperation among state-supported organizations, institutions, and initiatives</p> | <p>A. Partner with other school districts as well as community entities to collaborate in order to provide assistive technology demonstration, loan, and assessment for students with special needs</p> <p>B. Utilize a database of institutions willing to partner with high-need school districts by using the message board on the South Carolina: Teaching, Learning, Connecting (SCTL) Web portal (http://www.sctlc.com) where potential partners can communicate with one another and generate ideas</p> <p>C. Identify all of the organizations, institutions, and initiatives in the state that are currently focused on instructional technology applications</p> |
| <p>4.4 The school district will provide after-hours training and community access to labs, media centers, and classrooms.</p> | <p>A. Create opportunities for access to facilities for after-hours assistive technology training for students, parents, teachers, and community members</p> <p>B. Create and publish flexible schedules of after-hours technology access and training for students, parents, teachers, and community members</p> |

Action List:

- ❖ The district and each school will initiate and increase community collaborations that give students, teachers and members of the local community increased access to and training in technology, including assistive technology.
- ❖ The district and schools will publish school lab schedules showing after-hours technology access and training.
- ❖ The district will maintain logs of professional development, community offerings and internship opportunities in technology.
- ❖ The district will publicize successful collaborations with outside entities in the demonstration, loan and assessment of assistive technology.
- ❖ The district will publicize successful technology grant applications on the Internet for others to use as models.
- ❖ The district will develop lists of possible partner organizations, institutions and initiatives.
- ❖ District surveys will provide information leading to increased access and use of school facilities for after-hours technology training.
- ❖ The district will develop flexible technology training schedules.

Implementation Action Steps:

The district will:

- Submit a technology plan, including a professional development plan, to the SDE Office of Technology for approval.
- Encourage flexible lab, media center and classroom hours among schools, including opportunities for community members to see and try assistive technology.
- Initiate partnerships with community entities to research technology projects.
- Include members of the community in writing technology grants to develop and fund better teaching and learning through technology, including assistive technology.
- Utilize the district's web site to publicize a list of volunteers for possible technology partnerships.
- Measure access and use of the schools' technology facilities.

The schools will:

- Submit a technology plan, including a professional development plan, to the district.
- Distribute parent and community information through report cards.
- Develop, implement and publicize flexible lab, media center and classroom hours, including opportunities for community members to see and try assistive technology.
- Initiate partnerships with community entities to create greater access to technology and a community learning environment.
- Initiate partnerships with community entities to research technology projects.
- Include members of the community in writing technology grants to develop and fund better teaching and learning through technology, including assistive technology.

Funding Considerations:

District:

- Evaluation experts to help show the impact of community programs and initiatives
- High quality, sustained community training technology programs offered via innovative delivery methods
- Community and apprentice internships
- Facility operation beyond the regular school day
- District survey administration, collection and analysis, and reporting
- Grant-writing experts and workshops

Schools:

- Evaluation experts to help show the impact of community programs and initiatives
- High quality, sustained community training technology programs offered via innovative delivery methods
- Community internships
- Facility operation beyond the regular school day
- School survey administration, collection and analysis, and reporting

Evaluation of Objectives

The district will employ a variety of evaluation measures as outlined below to determine the scope and effectiveness of its efforts in addressing this goal and its objectives

| Objectives | Possible Baseline Data | Possible Data Sources |
|------------|---|---|
| 4.1 | Statewide achievement test scores | Statewide achievement test scores |
| 4.2 | Community Technology Access survey | Community Technology Access survey |
| | Lab, media center and classroom schedules | Lab, media center and classroom schedules |
| | CCSD Technology Counts survey | CCSD Technology Counts survey |
| | School Technology and Improvement plans | School Technology and Improvement plans |
| | Documentation of offerings provided via innovative delivery methods | Documentation of offerings provided via innovative delivery methods |
| | | Observations and interviews |
| | | District and school web site information |
| | | District and school lists of grants and community partnerships |

Dimension 5: Support Capacity

Goal: Chesterfield County School District will expand and support technology resources to assist educators and learners in attaining 21st century skills and meeting the state academic standards.

Snapshot of Current Technology Use:

The district presently supports technology through:

- Offering a robust selection of in-service and training activities administered by the technology department to address the specific needs of classroom teachers and administrators in fully and effectively utilizing the available technology resources. Over 95% of all teachers currently meet the district expectations for “basic teacher technology competence.”
- Maintaining a well-developed network infrastructure with a variety of network-based resources, email and web server. The WAN employs 10MB and 100MB circuits to connect all schools. Network downtime is minimal with many maintenance procedures conducted during non-school hours.
- Two technology coaches have been employed to work directly with classroom teachers in enhancing their technology skills and assisting in the integration of technology into daily instruction.
- Through a responsive system of direct technical support, one technician and two engineers are available to assist technology users with hardware and software problems.

| Objectives | Strategies |
|---|---|
| 5.1 The school district will ensure that their schools have an integrated, secure network infrastructure with dynamic bandwidth capacity to support fully converged networks that allow for communication, data collection and distribution, and distance learning. | <ul style="list-style-type: none">A. Ensure the installation, maintenance, and support of multimedia-capable teacher stations in classrooms including computer-attached projectors to support large-group instructionB. Install and maintain networks, virus protection, and Internet filtering according to industry standards by implementing systemic, state-of-the-art network security tools at all levels of access to LANs, WANs, and other networksC. Establish a system for identifying, specifying, prioritizing, and managing equipment for multimedia development in direct support of curricular and professional development objectivesD. Assess LAN/WAN technology currently implemented to determine bandwidth and infrastructure needsE. Implement a district network management tool that performs automated software installationF. Communicate in the district technology plan a vision for multimedia infrastructure designed to support instructionG. Use bundled distribution packages as a primary means of distribution to manage fully converged networks |

| | |
|--|---|
| <p>5.2 The school district will implement an obsolescence and upgrade plan to replace and recycle equipment and software</p> | <p>A. Ensure that the obsolescence and upgrade plans are included in the district technology plan</p> |
| <p>5.3 The school district will ensure that all students, including those with special needs, and teachers have access to digital information resources.</p> | <p>A. Conduct needs assessments (1) to identify required network components, workstations, and other devices needed for network access, including assistive technology devices, and (2) to identify and evaluate software applications required to meet academic needs as well as peripherals and other resources required to create universal access to network resources</p> <p>B. Seek school and district funding from available local, state, and federal sources, including E-rate, grants, and bonds</p> <p>C. Create a district strategic plan for acquiring and implementing the technology, including assistive technology, that is required to provide universal access to network resources</p> <p>D. Develop the district strategic plan with input from all segments of the school community— students, teachers, therapists, administrators, parents, community members, community agencies, and local businesses—and include in the plan a mechanism for review and revision as needed</p> <p>A. Maintain a technology inventory that includes the status of current network/Internet access, workstations and other devices available for access, software applications available for addressing state academic standards, peripherals, and other factors related to universal access to network resources</p> |
| <p>5.4 The school district will have qualified technical staff, including one networking engineer per WAN or per ten LANs, one networking technician per LAN, and one end-user support technician per every five hundred users</p> | <p>A. Develop district-wide minimum staffing requirements and job descriptions, with a state-guided salary schedule, for the positions of networking engineer, networking technician, educational technology director, and support technician</p> <p>B. Provide state-level network support for district engineers</p> <p>C. Appoint a district technology director who will lead a committee in identifying and evaluating network management tools that will meet the needs of the district and all schools</p> |
| <p>5.5 The school district will increase their ability to design Web pages and Web-based instruction that are accessible to students and staff, including those with special needs</p> | <p>A. Provide training in basic Web page accessibility principles to staff, teachers—and, when appropriate, students—who design Web pages as part of the curriculum</p> |
| <p>5.6 The school district will implement a disaster recovery plan for all points of failure, in LANs and WANs, including redundant data storage, robust automated backup, and immediate hardware recovery.</p> | <p>A. Ensure that schools will have electrical distribution systems that provide isolated circuits in all classrooms and redundant power sources for mission-critical equipment</p> <p>B. Implement a district management application that monitors bandwidth on the LAN and WAN and provides network failure alarms that can be accessed remotely</p> <p>C. Ensure that disaster recovery plans are included in the district technology plan</p> |

Action List:

- ❖ CCSD will have access to a database with a complete technology inventory, including assistive technology, showing the type of equipment/device, its location, its use, peripherals to which it has access, applications to which it has access, and other relevant information.
- ❖ The district will maintain a needs-assessment document showing technology-based resources and applications required to address the mission of the district, including networking, hardware/devices, and software applications as well as assistive technology.
- ❖ CCSD will include in their local budgets line items for technology, including assistive technology, with sufficient funding to implement the designated strategies.
- ❖ The district will publish a procedure for the perpetual review of equipment used in multimedia development processes. Reviews should quantify equipment and processes by their impact on teaching and learning.
- ❖ CCSD will maintain a strategic plan for acquiring and implementing technology, including assistive technology, for universal access to network resources. This document should show the strategies for addressing the identified needs, the persons responsible for addressing and completing each strategy, and the resources/funds necessary to fully implement the strategies.
- ❖ The district technology plans will include a strategic vision for building a multimedia infrastructure to support instruction.
- ❖ District technology plans should include a disaster recovery plan.
- ❖ The district will have access to a database with a complete technology inventory, including assistive technology, showing the type of equipment/device, its location, its use, peripherals to which it has access, applications to which it has access, and other relevant information.
- ❖ CCSD will maintain a needs-assessment document showing technology-based resources and applications required to address the mission of the district, including networking, hardware/devices, and software applications as well as assistive technology.
- ❖ The district will include in their local budgets line items for technology, including assistive technology, with sufficient funding to implement the designated strategies.
- ❖ CCSD will publish a procedure for the perpetual review of equipment used in multimedia development processes. Reviews should quantify equipment and processes by their impact on teaching and learning.
- ❖ The district will maintain a strategic plan for acquiring and implementing technology, including assistive technology, for universal access to network resources. This document should show the strategies for addressing the identified needs, the persons responsible for addressing and completing each strategy, and the resources/funds necessary to fully implement the strategies.
- ❖ CCSD technology plans will include a strategic vision for building a multimedia infrastructure to support instruction.

- ❖ District technology plans should include a disaster recovery plan.
- ❖ District technology plans should include obsolescence and upgrade plan, including strategies to refurbish, resell, recycle, or donate obsolete devices.
- ❖ District policies outlined in district technology plans should include security accountability, virus protection, and Internet filtering guidelines.
- ❖ District technology plans should provide for outlets and amperage for meeting industry standards and building codes.
- ❖ CCSD will use professional discussion groups to share the results of their research about the implementation of integrated network infrastructures and bundled distribution practices.
- ❖ The district will have records to show that they have assessed their current LAN/WAN technology.
- ❖ District network managers will provide the district office with quarterly reports of statistics on bandwidth utilization.
- ❖ CCSD will use the SDE Technology Counts on-line survey to report on their use of network management tools.
- ❖ The district will ensure that new school construction provides for isolated power in each classroom, computer lab, telecommunications closet, and work area.
- ❖ CCSD will provide UPS (uninterruptible power supply) systems for all critical equipment.
- ❖ The district will use the minimum staffing and salary requirements for the positions specified in objective 4.3.
- ❖ CCSD will have a network manager in place.
- ❖ The district should establish network security support within the Office of Technology.
- ❖ District staff, teachers, and students should be aware of basic Web accessibility guidelines when designing Web pages.
- ❖ The district will designate a Web accessibility resource person to coordinate training and information sharing among district personnel.

Implementation Action Steps:

The district will:

- Maintain technology inventories, including assistive technology
- Conduct needs assessments to identify required technology, including assistive technology
- Create a strategic technology plan that includes strategies for acquiring, managing, and implementing required technology, including assistive technology

- Implement a district disaster recovery plan and an obsolescence and upgrade plan
- Seek funding from local, state, and federal sources
- Encourage and publicize flexible access schedules
- Create a vision for a multimedia infrastructure
- Encourage schools to provide multimedia-capable workstations
- Research and implement an integrated network infrastructure
- Use bundled distribution packages to manage fully converged networks
- Install and maintain secure networks
- Employ staff for adequate network maintenance and support
- Implement a district management application that monitors bandwidth on the LAN and WAN
- Ensure that schools have adequate electrical distribution systems
- Publish procedures and schedules for review of equipment and software used in multimedia development including rubrics for judging impact on teaching and learning
- Provide schools with the necessary guidance and training in creating Web pages to ensure that electronic information is accessible to students and teachers with special needs

The schools will:

- Create a strategic technology plan that includes strategies for acquiring and implementing required technology, including assistive technology
- Seek funding from local, state, and federal sources
- Create flexible schedules for access to technology
- Provide multimedia-capable workstations
- Install and maintain secure networks
- Employ staff for adequate network maintenance and support
- Provide adequate electrical distribution systems

Funding Considerations:

District:

- Total cost of ownership (TCO) calculation to determine the allocation per student per year necessary to keep the pace with the need for access to network resources [Consortium for School Networking]
- Consortium for School Networking's (CoSN) TCO tool available on-line at <http://www.classroomtco.org>
- Technology committee meetings to develop products such as the multimedia infrastructure plan and the disaster recovery plan
- Materials to publish an updated technology plan
- Multimedia teacher workstations including LCD projectors, interactive whiteboards, document cameras and enhanced classroom audio
- Hardware and software to secure all LANs and WANs to comply with district, state, and industry standards
- Technology director, networking engineer, and networking technicians
- Equipment inventory assessment program
- Isolated circuit plan
- Support planning
- Technology needs assessments and surveys

Schools:

- Total cost of ownership (TCO) calculation to determine the allocation per student per year necessary to keep the pace with the need for access to network resources [Consortium for School Networking]
- School Networking's TCO tool available on-line at <http://www.classroomtco.org>
- Technology committee meetings to develop products such as the multimedia infrastructure plan and the disaster recovery plan
- Materials to publish an updated technology plan
- Multimedia teacher workstations including data projectors
- Hardware and software to secure all LANs and WANs to comply with district, state, and industry

- standards
- Support planning
- Technology needs assessments and surveys

Evaluation of Objectives

The district will employ a variety of evaluation measures as outlined below to determine the scope and effectiveness of its efforts in addressing this goal and its objectives

| Objectives | Possible Baseline Data | Possible Data Sources |
|------------|---|---|
| 5.1 | Statewide achievement test scores District Report Cards | Statewide achievement test scores District Report Cards |
| 5.2 | Professional development tracking and surveys District, school and community surveys | Professional development tracking and surveys District, school and community surveys |
| 5.3 | CCSD Technology Counts survey School Technology and Improvement plans | CCSD Technology Counts survey School Technology and Improvement plans |
| 5.4 | Documentation of offerings provided via innovative delivery methods | Documentation of offerings provided via innovative delivery methods |
| 5.5 | Documented access to technology resources Technology needs assessment | Documented access to technology resources Observations and interviews |
| 5.6 | Budget data State personnel reports | Technology needs assessment Budget data State personnel reports |

CUMULATIVE TARGETS AND BENCHMARKS

Learners and Their Environment

- Ninety percent of the district's students will have documentation for their acquisition of grade-level-appropriate competencies as well as their use of digital information systems to complete authentic tasks.
- Ninety percent of the district's students will possess effective communication skills and technology literacy as evidenced by teacher and student technology portfolios and by presentations at technology conferences and fairs.

Professional Capacity

- Ninety-five percent of the district's teachers will possess technology proficiency as evidenced by teacher technology proficiency assurance forms. Ninety-five percent of the district's teachers will also document proficiency by keeping a journal of course experiences, interacting with the school technology coach, and integrating technology into the teaching of the state curriculum standards.
- Seventy-five percent of the schools will have a technology coach who trains teachers and visits classrooms to help teachers integrate digital information systems into the curriculum.
- Fifty percent of the schools will have an assistive technology coach who trains teachers and visits classrooms to help teachers integrate assistive technology into the curriculum.
- The district will have an assistive technology assessment team that coordinates assistive technology assessments for students with special needs.

Instructional Capacity

- Ninety percent of teachers will integrate technology and 21st century skills into their teaching of the South Carolina academic standards as evidenced by the technology proficiency assurance forms and teacher portfolios.
- Eighty percent of students will meet the information literacy and technology skills for their grade level as found on the performance matrix for information literacy and technology education.

Community Connections

- The district will report active community collaborations that result in better teacher and student access to technology, better teacher and student use of technology, more teacher and student real-world experiences in technology-related fields, more research and evaluation of technology projects, and more community collaboration technology grants submitted and dollars funded.
- The district will have a community partnership that provides research and evaluation for a district's major (school-wide or larger) technology projects.
- The district will establish and maintain a K-12 educational portal that lists willing community participants and partners who can provide services to supplement the curriculum.
- The districts will provide and document professional development training in how to access and use available community resources. Results will be reported through the SCDE online professional development tracking system.

Cumulative Targets and Benchmarks, continued

- The district's elementary, middle, and high schools will provide access to technology-related facilities after hours for parents, teachers, and community members.

Support Capacity

- The school district will include in their technology plan an assessment of their current technology needs, their current technology inventory, and their current technology support strategies using ISTE standards as their guide.

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Developing a School Technology Plan.
<http://www.ncrel.org/sdrs/areas/issues/methods/technlgy/te300.htm>

National Education Technology Plan for the Department of Education.
<http://www.ed.gov/about/offices/list/os/technology/plan/2004/site/edlite-background.html>

Appendix 1: No Child Left Behind Action Plan

1. A description of how your district will use federal funds including Enhancing Education through Technology (E2T2) competitive and/or formula funds to improve the academic achievement, including the technology literacy, of all students attending the schools served and to improve the capacity of all teachers teaching in these schools to integrate technology effectively into curricula and instruction.

The district was awarded a three year E2T2 competitive grant in 2002 which has been used to implement technology coaches who have directly assisted teachers in integrating technology into their classrooms. During each of the past four years, E2T2 formula grant funds have been used exclusively to support this effort and to enhance the technology in-service activities afforded teachers throughout the district. E2T2 funds are being used again this year to continue that program through the continuing employment of three technology coaches and associated equipment and supplies.

2. A description of your school district's specific goals for using advanced technology to improve student academic achievement aligned with challenging state academic content and student academic achievement standards. This explanation should include a description of the curriculum and teaching strategies that integrate technology effectively into curricula and instruction, based on an intensive review of relevant research.

Providing appropriate technology and training to classroom teachers to enable them to utilize "best practices" in the delivery of instruction is viewed as a primary goal of the district's technology effort. The district is presently in the early stages of equipping all classrooms with ceiling mounted LCD projectors, interactive whiteboards, document cameras and enhanced classroom audio to provide these proven technology tools to teachers. Software and web-based resources directly keyed to the state's instructional standards in all subject areas further enhance the utility of these tools.

3. A description of the steps your district will take to ensure that all students and teachers in schools served by the local education agency have increased access to educational technology.

The district is presently moving forward in its plan to equip all classrooms with an array of "basic technology instructional tools." The district continues to expand its computing base and network infrastructure as well as its support capacity. Both teacher and student technology standards (competencies) have been identified and the district is moving toward ensuring that both teachers and students acquire these competencies and are able to apply them appropriately.

4. A description of how your district will use the E2T2 competitive and/or formula funds (including the combining of these funds with monies from other federal, state, and/or local sources) to help ensure that students in high-poverty and high- needs schools have access to technology and to ensure that teachers are prepared to integrate technology effectively into curricula and instruction.

The district's recent E2T2 competitive grant was implemented initially at three schools, those with the poorest scores reported on state standardized testing. The district continues to assess student academic deficiencies and to address these with specific remedies, many of which are technology driven. The district's annual E2T2 formula grants are totally oriented toward teacher

training and the provision of in-service activities and workshops providing teachers with the skills to effectively employ technology in the enhancement of student achievement gains.

5. A description of how your district will provide ongoing, sustained professional development for teachers, principals, administrators, and school library media personnel serving the local education agency, to further the effective use of technology in the classroom or library media center, including, if applicable, a list of the entities that will be partners with the local education agency involved in providing the ongoing, sustained professional development.

The district offers a robust staff development program for teachers, administrators and non-certified support staff. Two graduate courses have been developed and offered to over 700 teachers providing basic and advanced technology skills. The district has additionally developed over forty workshops and inservice activities which address specific, narrowly focused skill areas in providing staff members with essential technology skills. The State Department of Education, local colleges, in-house personnel and vendors have contributed to this effort.

6. A description of the type and costs of technologies to be acquired for your technology program through the use of E2T2 competitive and/or formula funds, including supporting sources such as services, software, and digital curricula. Your explanation should include specific provisions for interoperability among the components of such technologies.

E2T2 competitive and formula funds have been expended in recent years to fund technology coaches and other staff development activities associated with the training of classroom teachers to effectively use technology in the classroom. Approximately \$80,000 in E2T2 carryover funds are being utilized in the current year to equip 15 classrooms with ceiling mounted LCD projectors (\$900), interactive whiteboards (\$1200), document cameras (\$600), enhanced classroom audio (\$1100) and laptop computers (\$1000). An extensive staff development effort will provide training for these classroom teachers in the use of these specific equipment items and the available software and resources to integrate this technology into the daily instruction of state academic standards. These components have been carefully chosen to complement one another and to work together in a "technology infused classroom" supportive of research-based instructional activities and identified "best practices."

7. A description of how your district will integrate technology (including software and other electronically delivered learning materials) into curricula and instruction to support standards-based learning and provide a timeline for such integration.

See responses to items 2, 3, 4, 5 and 6 above. The district additionally employs a variety of other standards-based software in supporting instruction (SuccessMaker, Renaissance Place, A+, NovaNet, FitnessGram, MAP, SAT Prep, etc.).

8. A description of how your district will encourage the development and utilization of innovative strategies for the delivery of specialized or rigorous academic courses and curricula through the use of technology, including distance learning technologies, particularly for those areas that would not otherwise have access to such courses and curricula due to geographical isolation or insufficient resources.

The district presently utilizes SuccessMaker and CompassLearning software in all elementary and middle schools to supplement standards-based instruction. Both A+ and NovaNet software is used to provide students in alternative instructional settings and those with special needs with appropriate standards-based instruction that might not otherwise be available. The district is presently investigating the use of "virtual classes" developed and offered through the state to

meet the needs of a minority of students for whom such high quality instruction in specific skills would not otherwise be available.

9. A description of how your district will ensure the effective use of technology to promote parental involvement and increase communication with parents, including a description of how parents will be informed of the technology being applied in their child's education. Explain how these strategies will allow parents to reinforce at home the instruction their child receives at school.

Refer to Technology Dimension 4

10. A description of how programs in your district will be developed, where applicable, in collaboration with adult literacy service providers, to maximize the use of technology.

Refer to Technology Dimension 4

11. A description of the process and accountability measures that your district will use to evaluate the extent to which the activities in your technology plan, including those activities funded under the E2T2 program, are effective in integrating technology into curricula and instruction, increasing the ability of teachers to teach, and enabling students to meet challenging state academic content and student academic achievement standards.

Refer to Technology Dimension 4

12. A description of the supporting resources (such as services, software, other electronically delivered learning materials and print resources) that will be acquired to ensure successful and effective uses of technology.

Refer to Technology Dimension 4 and responses 2, 4, 5, 6, 7 and 8 above.

Appendix 2: Teacher Technology Proficiency Proviso Professional Development Plan

History

The district began an ambitious teacher technology training program in 1996 by developing and offering free of charge a graduate credit course which offered most teachers their first experience with computer technology. Participant teachers addressed the five skill areas below and, as a part of the course, built a multimedia computer from its component parts and relocated this equipment to their classroom to support the instructional program. Since 1997 over 700 teachers have successfully completed this course which required that they:

- Demonstrate a basic, working knowledge of the Windows environment with the ability to manage files and media
- Demonstrate proficiency in the use of Microsoft Word in the creation of documents appropriate to instructional applications and also demonstrate a familiarity with other "productivity tools" such as MS Excel, Access, PowerPoint, Publisher, FrontPage, etc.
- Demonstrate a knowledge of and the ability to effectively use a district-provided GroupWise email account.
- Demonstrate the ability to use a browser; access the Internet; search, locate and evaluate appropriate digital instructional resources and incorporate these resources into daily instruction.
- Demonstrate a knowledge of district technology use expectations to include appropriate issues of law, ethics and courtesy.

In 2005 the district began certifying teachers under the legislature's Teacher Technology Proviso as "technology proficient" if they met these five expectations.

Current and Future Direction

Using a combination of E2T2 competitive and formula grant funds, state grants and local funding, the district is now employing two full-time technology coaches whose primary responsibility is to assist elementary teachers with the integration of technology into their classrooms and daily instruction. For the past two years these coaches have worked closely with the state department of education in developing a model teacher assessment program which employs ISTE-T standards for teachers. These coaches have additionally created individual activities (both self-directed and 1-on-1 with an instructor) and small group activities which specifically address the prescriptive technology needs of teachers identified by the assessment program. Teachers can progress through three levels of standards-based skills at their own pace and at times and locations convenient to them. Teachers will not only complete activities to document their skill mastery but will also maintain a portfolio to support their achievement level.

The district is currently using the e-Portfolio system designed by the SC Department of Education and aligned to the new ISTE standards. About 30% of the teachers on staff are on mastery of the new standards and testing is on-going thought out the year.

Appendix 3: Acceptable Use Policy

Students and Staff

I. Philosophy

Technology is viewed as an important tool in the educational process. The acquisition of technology skills by students and teachers and their application in furthering the teaching/learning process is seen as a vital aspect of student learning and staff development.

II. Network/Internet Access

The district will make available to its staff and students the resources of its computer network in support of teaching and learning. It is the policy of the school district that all uses of this technology will demonstrate responsible, legal and ethical practices.

Any use of the network must be in support of educational objectives, consistent with the instructional curriculum and always under the supervision of school district staff.

III. Terms and Conditions of Use

Each individual is accountable for their use of this network. All individuals provided access to the network will be instructed in the appropriate use of these resources. All users are expected to comply with administrative rule IJNDB-R. Violation of this policy or administrative rule will subject individual users to disciplinary action and/or restriction or termination of usage privileges. In addition, parents/legal guardians will be required to sign a permission form at the beginning of each school year before students will be allowed access to the network. Students must sign a form annually acknowledging that they have read and understand the policy and administrative rule, that they will comply with the guidelines set forth, and that they understand the consequences for violating the policy or administrative rule.

The district makes no warranties of any kind regarding access to this computer network and the district will not be responsible for damages that may be suffered as a result of loss of data, non-deliveries, service interruptions, etc. Use of any information obtained through the network is at the user's own risk. The district makes no claim for nor will be held responsible for the accuracy or quality of information obtained through the network.

Administrators and teachers may access the district computer network for educational or work-related purposes at any time which is not disruptive and does not interfere with the performance of other responsibilities by the employee or other staff members.

Students will be allowed access to the network only through their teachers. No students may access the network without permission. Student use of the network will be supervised by a staff member.

All users of the district computer network are expected to do the following.

- Use language that would be appropriate for classroom discussion.
- Observe generally accepted rules of network etiquette
- Send only information that others would not find offensive
- Access only information sites and sources consistent with an educational assignment or purpose and considered to be of educational value in the context of the school setting

- Accept that electronic mail is not guaranteed to be private. People who operate the network have access to all mail. Messages relating to or in support of illegal or inappropriate activities will be reported to the appropriate authorities
- Conform with U.S. Copyright law. All communications and information accessible via the network should be assumed to be private property
- Not use these technology resources for commercial activities or political purposes
- Never reveal personal information (full name, address, identifying numbers, etc.) regarding yourself or any user except when approved by a staff member
- Engage in no activities that degrade the performance of the network or alter data which is not the sole property of the user
- Report immediately to a staff member (or immediate supervisor if the user is a staff member) any access of communication or material, by intent or accident, that would be considered objectionable or inappropriate for use in an educational classroom setting
- Submit an agreement form signed by the user (and parent/legal guardian if a student) acknowledging understanding of the rules of use of this technology prior to being granted independent use of these resources involving a lesser level of direct supervision

IV. Penalties for Improper Use

An employee who violates the terms of this policy or otherwise misuses the computer network to access inappropriate material will be subject to disciplinary action, up to and including discharge. The privilege of accessing the network may also be withdrawn. Students who do not follow these rules will be disciplined in accordance with the district's student discipline policy. Breach of these rules is viewed as failure to comply with school rules and procedures and appropriate disciplinary action will be administered by the building principal or his/her designee. Such disciplinary procedures may include, but are not limited to: conference, reprimand, letter to or conference with parents/legal guardians, assignment to in-school suspension, temporary revocation of independent network access privilege, school suspension, and recommendation of expulsion. Violations of the laws of the United States or the State of South Carolina also may subject the user to criminal prosecution. If a network user incurs unauthorized costs, the user, as well as the user's parents/legal guardians if the user is a student, will be responsible for all such costs

STUDENT/STAFF MEMBER INTERNET USE AGREEMENT

I agree to abide by the rules set forth in this agreement when using the school district's computer equipment and in accessing resources located on the school's network and the Internet.

Date

Student or Staff Signature

Date

Parent Signature (if student signs above)

Appendix 4: How E-Rate Areas Have Been Addressed

1. The district technology plan must establish clear goals and a realistic strategy for using telecommunications and information technology to improve education and library services.

Refer to Technology Dimension 3

2. The district technology plan must have a professional development strategy to ensure that staff members know how to use the new technologies to improve education.

Refer to Technology Dimensions 2 & 5 and Appendix 2

3. The district technology plan must include an assessment of the telecommunications services, hardware, software, and other services that will be needed to improve education.

Refer to Technology Dimensions 1-5

4. The district technology plan must provide for a sufficient budget to acquire and maintain the hardware, software, professional development, and other services that will be needed to implement the strategy for improved education. Specifically, how does the district intend to fund those items of equipment, software, services, and training *not* covered by the E-rate discount? It is recommended that a plan for hardware refreshment be built into all district technology plans.

Refer to Appendix 6

5. The district technology plan must include an evaluation process that enables the district and its schools to monitor progress toward the specified goals and make midcourse corrections in response to new developments and opportunities as they arise.

Refer to Technology Dimensions 1-5

Appendix 6: Chesterfield County Schools District Budget - School Year 09-10

| Budget Category | Budget Amount |
|------------------------|---------------|
| Purchased Services | 135, 996.00 |
| Supplies and Materials | 65,629.00 |
| Equipment | 36,176.00 |
| E-rate | 296,982.00 |

Annual Technology Plan Update

Chesterfield County School District

August 2009

This annual update identifies the significant accomplishments of the school district in the area of technology during the past year, the expected activities for the coming year, the technology budget for 2009-10 and the status of the district's certification of teachers with respect to the SC Teacher Proviso 1.25.

Accomplishments in 2008-09

District Technology Infrastructure

The district technology staff completely cabled the new Edwards Elementary School housing 550 students. Each classroom is equipped with six network drops providing 100MB Ethernet CAT5e service. Fiber exists between the two data closets. Each core curricular classroom is equipped with a ceiling mounted projector, Promethean interactive whiteboard and document camera installed by the local technology staff.

New construction at Ruby Elementary School consisting of four classrooms and six office spaces was cabled with Ethernet CAT5e and rerouting of existing cable was completed to provide for the relocation of the MDF.

The network operating system for the twenty LAN sites and the district office was upgraded to current patch levels for Netware 6.5.

Three additional Windows 2003 servers were installed to service district-based instructional software and instructional support systems.

The district's burdened 10MB connection to the Internet was enhanced to a 20MB connection to service all twenty district sites.

Access To Technology

The district technology staff created and fully equipped a computer lab at Chesterfield-Ruby Middle School with twenty-five workstations, printer and ceiling mounted projector. Fourteen of the district's sixteen schools now house at least two fully equipped computer labs for daily student use. Two schools, the two smallest in the district, because of space restrictions, have only one lab available.

One media center was equipped with 30 wireless laptop computers for student use.

The student laptop initiative in the McBee attendance area distributed 210 laptops to students in the sixth, seventh and eighth grades for use in their wireless equipped classrooms and for use at home.

Approximately 220 student and teacher workstations were refreshed removing the oldest equipment from service.

The district technology staff provided for the installation and teacher training for the implementation of 77 additional Promethean boards and ceiling mounted projectors throughout the district's classrooms.

Technology Usage

The district continued a competitive E2T2 grant providing technology coaches for three schools in the district as well as laptop computers for 210 students. The project is designed to provide one-on-one, on-site assistance to teachers in integrating technology in their daily instruction. Additional equipment and significant training has been offered the teachers at these three schools. Additionally, these coaches have worked with teachers in the remaining thirteen schools in developing and implementing the ePortfolio system to assess and enhance teacher technology skills.

The IT Direct Work Order system was fully implemented throughout the district with an icon appearing on all faculty and staff members' desktops providing immediate access to district technology personnel for work order request entry or response to questions. The system has been functional and well received.

An additional seventy-seven interactive whiteboards were installed in classrooms with a total of 367 classrooms now equipped representing over two-thirds of the district's instructional classrooms now equipped with interactive whiteboards and ceiling mounted projectors.

All eighth graders were assessed with the ePortfolio tool and results will be reviewed to determine appropriate programmatic revisions to address areas of concern.

Staff Development

More than thirty workshops were offered throughout the district by the technology department to assist teachers and staff in acquiring and implementing technology in their daily instruction and management of the educational process.

Teachers continue to make fuller use of CLASSxp and IGPro in classroom management. The installation of an IGPro Server during a prior year and the funding of an IGPro School Coordinator at each school to assist teachers individually and on-site has increased the usage and effectiveness of this productivity tool.

The district trained and certified an instructor who offered the Intel – Teach To The Future course this past year and will offer the course to teachers at no charge in the coming year. Teachers taking the class were enthusiastic and recommended the course highly to their colleagues.

The district is participating along with four other districts in a state pilot project to develop an evaluation instrument for assessing both student and teacher mastery of ISTE standards. The Technology Steering Committee will this year be addressing the continuing expectations for compliance with Proviso 1.25 for teachers who previously satisfied the requirements. All teachers and school administrators were assessed with the ePortfolio tool to determine strengths and weaknesses in their technology skills. The district will continue to develop specific and prescriptive materials to be utilized by all staff in addressing their respective technology skill needs.

Over 380 teachers have now been trained in the use of interactive whiteboards and are receiving continuing and ongoing inservice to further their use and effectiveness with this technology which has been permanently installed in their classrooms.

Compliance with Proviso 1.25

| Teacher's Certificate Expiration Date | 2007 | 2008 | 2009 | 2010 | 2011 |
|--|------|------|------|------|------|
| No. Presently Employed and Under Proviso | 124 | 118 | 114 | 102 | 98 |
| No. Presently Not Yet Meeting Compliance Std | 0 | 0 | 2 | 8 | 13 |

Our two Technology Coaches, partially funded with E2T2 resources, are working with all schools this year to assess all teachers and implement a technology inservice model based upon the new ISTE Standards and the revised ePortfolio system they are helping to develop for the state.

Planned Activities for 2009-10

Upgrade and refresh core infrastructure equipment which is aging and in need of replacement. Implement PowerSchool and VMware server solution to replace aging servers at district office and 20 school sites utilizing a combination of local and E-Rate funding. Replace as possible the oldest student and teacher workstations in current use with current models less prone to failure and capable of enhanced performance.

Continue implementation of V-Brick solution for media distribution of ETV programming and other digital resources in cooperation with state/ETV.

Continue implementation of year five of the E2T2 grants partially funding the Technology Coaches with additional training activities for both coaches and school personnel and development of standards for continuing compliance with Proviso 1.25.

Continue to install Promethean interactive technology in classrooms and provide initial and ongoing training for teachers in their effective use. An expected additional 30 classrooms will be equipped.

Continue offering Intel: Teach To The Future course in-district for local teachers at no cost to the teacher. Offer additional on-site targeted technology workshops for teachers (at least fifty offerings). Offer targeted, online instructional materials to all staff based upon the results of prescriptive ePortfolio assessment.

Research, evaluate and propose student performance standards for technology skills based upon ISTE and the results of student ePortfolio performance.

Budgeted Technology Funds for 2009-10

Revenues

| | |
|---|---------|
| Local General Fund (Staff Salaries/Ben) | 251,000 |
| General Fund Salary Matching & Benefits | 76,000 |
| CATE Technician Salary Supplement | 29,000 |
| General Fund Supplies & Equipment | 239,000 |
| General Fund Telecom Expenses | 40,000 |
| E2T2 Competitive Grant 2009-10 | 150,000 |
| E2T2 Formula Grant 2009-10** | 58,000 |
| eLearning Tech Coach Grants** | 60,000 |
| E-Rate Telecom Reimb (08-09) | 162,000 |
| E-Rate Carryover from Prior Years | 197,000 |
| Media Services Transfer | 7,000 |

** Revenue Items not assured

Totals 1,269,000

Expenditures

| | |
|--------------------------------------|---------|
| Tech Department Salaries (6) | 285,000 |
| Tech Department Matching & Benefits | 85,000 |
| E2T2 Technology Coach (Sal/Ben) | 110,000 |
| Staff Development Expenses | 45,000 |
| E2T2 Laptop Project | 57,000 |
| Hardware Purchases | 240,000 |
| Software/Software Licensing | 92,000 |
| Retrofitting/Minor Remodeling | 30,000 |
| E-Rate 09-10 Proj (District Portion) | 160,000 |
| Maintenance Repairs (Non-E-Rate) | 55,000 |
| Supplies (Primarily School Printing) | 98,000 |
| Temporary Help/Salaries & Benefits | 12,000 |

1,269,000

DISTRICT TECHNOLOGY PLAN CHECKLIST

Please complete the shaded box on page 3 of this checklist form and return *all three sheets* as the cover pages of the completed technology plan.

✓ Cover Page

This page should contain the following:

- district name;
- name and signature of district superintendent;
- name and signature of technology coordinator;
- mailing address, phone and fax numbers, and email address of district technology coordinator;
- district home page URL; and
- effective dates covered by the plan (e.g., 2009–11).

✓ District Profile

This section should include the following:

- number of schools in the district,
- number of students enrolled in district schools,
- percentage of students eligible for free and reduced-price lunches,
- number of English as a Second Language (ESL) students,
- number of dropouts,
- graduation rate, and
- district E-rate discount.

✓ Executive Summary

This section must be a concise description of the entire technology plan.

✓ District Needs Assessment

This section should describe the district's current technology needs, current technology inventory, and current technology support strategies. All goals should specifically address your district's needs.

✓ District Vision and Mission Statements

These overarching statements should address the district's needs, including assistive technology needs, and should be aligned with the 2009–13 state technology plan as well as the No Child Left Behind legislation.

✓ Plans for the Five Individual Technology Dimensions

The narrative of the district's plans for the individual Technology Dimensions should be organized on the basis of the following five sections, which should ***be labeled and ordered as shown here:***

:

- Technology Dimension 1: Learners and Their Environment
- Technology Dimension 2: Professional Capacity

- **Technology Dimension 3: Instructional Capacity**
- **Technology Dimension 4: Community Connections**
- **Technology Dimension 5: Support Capacity**

In each of the above sections, the narrative for the technology dimension should be organized on the basis of the following seven sections, which should ***be titled and lettered as shown here:***

- A. Snapshot of Current Technology Use in District**
- B. Overall Goal for This Dimension**
- C. Objectives, Strategies, and Action List to Reach Goal**
- D. Implementation Action Steps for Districts and Schools**
- E. Funding Considerations for District and Schools**
- F. Evaluation of Objectives** (including baseline data sources and ongoing data sources)
- G. Current Best Practices in District** (if applicable)

✓ **Cumulative Benchmarks**

This section should list the benchmarks expected to be met during the period covered by the plan. Include a timeline and method for assessing benchmarks periodically.

✓ **Acknowledgements**

This section should contain a list of stakeholders that shows a wide diversity of school and community members who contributed to the planning process.

✓ **Appendixes**

- **Appendix 1: No Child Left Behind Action Plan**

Provide narratives for each of the twelve items in part C of the "Guidelines for District Technology Plans" section of the *South Carolina State Technology Plan 2009–13*.

- **Appendix 2: Teacher Technology Proficiency Proviso Professional Development Plan**

- **Appendix 3: District's Acceptable Use Policy**

- **Appendix 4: How E-Rate Areas Have Been Addressed**

See part B of the "Guidelines for District Technology Plans" section of the *South Carolina State Technology Plan 2009–13* for the five E- rate areas

✓ **Bibliography**

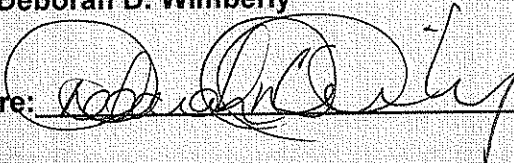
This section should provide full publication information and specific page references for all secondary sources utilized.

✓ **Other Vital Appendixes**

I verify that all above components for the Chesterfield County School District technology plan have been addressed.

Technology Director's name: Deborah D. Wimberly

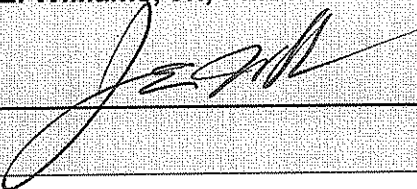
Technology Director's signature:



3/31/2010
Date signed

Superintendent's name: John E. Williams, Jr., Ph.D.

Superintendent's signature:



3/31/2010
Date signed